



US 20040224308A1

(19) **United States**

(12) **Patent Application Publication**
(10) **Pub. No.: US 2004/0224308 A1**
(43) **Pub. Date: Nov. 11, 2004**
Binley et al.

(54) **STABILIZED VIRAL ENVELOPE PROTEINS
AND USES THEREOF**

Publication Classification

(75) **Inventors:** James M. Binley, Brooklyn, NY (US);
Norbert Schuelke, New City, NY (US);
William C. Olson, Ossining, NY (US);
Paul J. Maddon, Scarsdale, NY (US);
John P. Moore, New York, NY (US)

(51) **Int. Cl.⁷** C12Q 1/70; C07H 21/04;
C12N 7/00; C07K 14/16;
C12N 15/867
(52) **U.S. Cl.** 435/5; 435/69.3; 435/235.1;
435/456; 435/366; 536/23.72;
530/350

Correspondence Address:

John P. White
Cooper & Dunham LLP
1185 Avenue of the Americas
New York, NY 10036 (US)

(57) **ABSTRACT**

(73) **Assignees:** Progenics Pharmaceuticals, Inc.;
Aaron Diamond AIDS Research Centre
(21) **Appl. No.:** 10/780,993
(22) **Filed:** Feb. 18, 2004

Related U.S. Application Data

(63) Continuation of application No. 09/602,864, filed on
Jun. 23, 2000, now Pat. No. 6,710,173.
(60) Provisional application No. 60/141,168, filed on Jun.

This invention provides an isolated nucleic acid which comprises a nucleotide segment having a sequence encoding a viral envelope protein comprising a viral surface protein and a corresponding viral transmembrane protein wherein the viral envelope protein contains one or more mutations in amino acid sequence that enhance the stability of the complex formed between the viral surface protein and transmembrane protein. This invention also provides a viral envelope protein comprising a viral surface protein and a corresponding viral transmembrane protein wherein the viral envelope protein contains one or more mutations in amino acid sequence that enhance the stability of the complex formed between the viral surface protein and transmembrane protein. This invention further provides methods